Cadastre 2014, what place for the surveyor?

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ABSTRACT

The surveyor has to find a place between new technologies and legal changes. All around the world, it is a profession which puts great effort into adapting to change.

Cadastre 2014 imagined where the cadastre would be by 2014. Many objectives have already been met, strongly supported by amazing technological advances, but others still remain in prospect because they are too closely linked to the political will which sometimes fails to express itself … but the movement is inexorably under way.

By travelling through various countries which I happily dream of, we shall attempt to indicate recent progress since 1994 and the path that remains to be followed, and thus to define the role of the surveyor in the 21st century and the cadastre as a means of development and alleviation of poverty.

INTRODUCTION

In 1994, following a survey carried out among some fifty countries, the Commission VII working group drew up an inventory which led it to imagine where the cadastre would be in 2014. That vision, known by the name Cadastre 2014, is based around 6 statements that deal with the mission, content, organisation, technical development, privatisation and independent management of cadastral systems. These statements form the directives intended to define what the cadastre should be like in 2014 (KAUFMANN and STEUDLER, 1998).

- Statement 1: The 2014 cadastre will show the complete legal situation of land, including public rights and restrictions.

- Statement 2: The separation between maps and registers will be abolished.
- Statement 3: The Cadastral mapping will be dead. Long live modelling!
- Statement 4: Paper and pencil cadastre will have gone.
- Statement 5: Cadastre 2014 will be highly privatised. Public and private sector are working closely together.
- Statement 6: Cadastre 2014 will be cost recovering.

Statements 2, 3 and 4 are the Cadastre 2014 technical statements. The development of new information technologies and the amazing growth of computerization have enabled many countries to implement these statements and to abolish the separation between maps and registers by setting up an information system.

Operations called *From the pen to the mouse* in the land register of Alsace Moselle in France and *From quill to electronic ages* in Ireland have emerged and the paper and pencil cadastre has gone.

In this paper we shall be looking at the surveyor's relationship with public law and the public domain.

THE SURVEYOR AND PUBLIC LAW

Before discussing the surveyor's relations with public law, we need to understand the relationship between private law and public law. Nowadays the majority of countries around the world are governed both by private law (legal rules binding private individuals or those in the private domain) and by public law when administrative decisions are involved.

Countries with a land register or Torrens Act obey simple rules: it is the entry in the land register that bestows the right of ownership. Registration cannot take place without a cadastral map. The cadastre is called legal because the map is not drawn unless the property boundaries are determined on equal terms and are marked.
The system is then said to constitute title.

Whatever the land title system, although all the legislative and regulatory instruments contain provisions to guarantee the reliability of the system, many countries do not apply them rigorously, which adds to the confusion and contributes to a lack of confidence in the land title system.
This is the case, for example, in Algeria. Ordinance 75-74 of 12 November 1975 governs the creation of the general cadastre and institution of the land register.
That ordinance only relates to private property, which means that the land registration system registers contracts between private owners covering property rights or charges restricting title. In Algeria, therefore, it is the registration which creates the right. The registration must be carried out on the strength of the general cadastre which provides for delimitation on equal terms and boundary marking of the title plots.
In fact, the cadastre cannot complete these operations to professional standards due to lack of resources. The results of the operations are therefore subject to guarantee and land registrars often refuse to carry out the 1st formality (registration), thus robbing the system of its effectiveness and promoting the development of an informal property market.

To overcome the delays in setting up the general cadastre, the Algerian government has promulgated a law on registration on demand inspired by the Torrens Act.

Although property rights are often advocated or even guaranteed by the Constitution, they can soon be reduced, either by that same Constitution or by a legislative body, by combining and overlaying them with all kinds of administrative restrictions: urban planning, private or official easements, spatial planning, public interest etc.

On public law matters, the administrative decision is often unilateral, which means that it is imposed on the citizen irrespective of the land title system (unilateral in France with a fiscal cadastre and in Switzerland with a legal cadastre, bilateral in Algeria, …).

Public property is often determined by default, which means that whatever is not private is public. Many countries have no inventory of the property in the Public – National - Domain, and certainly not an inventory of the legislation and the official restrictions and easements.

For example, Switzerland has a land title system which is based on a legal land ownership cadastre. It passed a law on geo-information which introduces a cadastre of public restrictions on land ownership in order to try to resolve the problems of legal force caused by data processing. This cadastre requires spatial definition of the restriction and its registration before it is enforceable against third parties. Surveyors worked on the modelling of the legal texts with a spatial impact in order to establish a link between laws, regulations and localization.

The Swiss experience shows that it is not easy to add public rights to the registration of private rights. The reliability of the information which is registered and is therefore public has to be guaranteed, which means having reliable information on the public restrictions on the land ownership.

Whereas in private law it is the section on easements which generally gives poor information, in public law it is the impenetrability which often obstructs things. The huge increase in legal requirements adds to the lack of transparency and makes certainty more and more difficult. Some measures can prove contradictory.

Full land control necessitates setting up an information system which combines all the information about the land. Incorporation of all the public restrictions could highlight any inconsistencies without having the means to resolve them. To mention only the case of sale of property in Western Europe, the prospective purchaser has to contact a number of authorities and a plethora of interlocutors. We like to dream about a great centralised system - a store of geographical data - where all the information would be available at one click.

The role of the surveyor

Due to the surveyor’s technical and legal knowledge and irrefutable role in geographical information, the surveyor can participate actively in:

- Registering rights with a spatial impact

- Translating all administrative decisions into graphics, including those with fuzzy or uncertain outlines
- Ensuring the reliability of overlays, particularly by promoting the single geographical reference set
- Assisting and supporting information management through modelling and structuring of the data, but also by participating in its distribution.
- Carrying out monitoring and helping to resolve conflicts arising out of inconsistencies in data overlay and modelling of legal texts.

THE SURVEYOR AND THE PUBLIC DOMAIN

In 1998, the members of the FIG Commission VII working group defined the role of surveyors in Cadastre 2014 as follows:

- Traditionally surveyors are responsible for all the property rights and public restrictions generally requiring a licence to practise as proof of the surveyor's ability to fulfil his public service function.

- This licence has lost its value because technology has made measurement easier and the legal professions (solicitors and barristers) have taken on an important role in the definition of title and are more involved in the settlement of land disputes.

- Within Cadastre 2014, the surveyor must become the interlocutor, and the private and public information manager. He is the agent for land in all its dimensions and in its entirety. This requires a redefinition of the licence to practise.

Are we just over halfway there? The redefinition of the role of the surveyor seems to be somewhat delayed. Although surveyors continue to be responsible for the rights and charges associated with common law, nothing has been done regarding rights and restrictions under public law.

There are many countries that have not fully realised the importance of management of the public domain and the rights associated with it and the importance of the economic approach to the public domain.

Delimitation and valuation allow the public domain to be considered as a business asset, in other words a slice of capital. For successful completion of these operations, information is everything. The multipurpose nature of the information lowers or even breaks down the barriers between the different departments and administrations and promotes the creation of a common concept.
The link between the various administrations promotes public property management, particularly the synergy between cadastre, land register inventory, urban planning and taxation. These link is not well developed in France, resulting in wastage of information and additional cost due to duplication of data capture and processing. Fortunately, French government departments are working on a unified geographical information management system combined with a geographical information system. This should enable the various authorities to be "reconciled".

As State Counsellor Thierry TUOT remarked to an Algerian delegation on a visit to France: "*The basis of the domain legal system is information"*.
It is essential to know and recognise the different participants involved at public domain dependency level if we are to create a public domain economy and control the environmental impact of that economy. It is major disasters like the wreck of the Erika that have shown that the great ideas are out of date. The public domain has long been the supporter of economic activity, mainly in the form of public utility concessions or delegations, for which the land register base is often outdated and non-transparent and the parties involved are more and more numerous: Owner, allocator, delegatee, administrator and subcontractor.
France has made great progress with establishment of property rights and opening up to competition under the impetus of Community directives, but has not yet completed the reforms. Despite the promulgation of the General Public Property Code, the land register legislation is still not ideal.

Therefore the surveyor has an important part to play in the multidisciplinary teams which must take charge of the inventory and valuation of the public domain.
The public domain is a complex area seen as the juxtaposition of what is BELOW the surface (services such as return or renewal assets) and what is ABOVE (Operational assets such as plant, machinery, fencing or logistics).

The surveyor is at the heart of the definition of space, the site of economic challenges. For example, there is stiff competition in port operations around the Mediterranean. The charges are no longer just rents but are calculated by formulas which take into account economic and profitability factors as well as traffic commitments on the part of investors. A genuine economic calculation is being set up here: if activity increases, local authority revenue increases and the charge can fall because local authority and investors benefit from profit sharing within a global economic environment.
The modern land register approach is one of joint venture in which the investor thinks in terms of assets and economic activity and the authority thinks like a financial manager.

CONCLUSION

Since 1994 more and more countries have initiated cadastral reforms, either by modernising information access or by creating a one-stop cadastre (Greece). Others have successfully completed their reforms and are looking towards the new 3rd dimension target.
All these projects aim to improve the quality of data access by modernising land services (Senegal road map), data reliability and legal security, one method being the creation of "intermediate" proof of ownership levels (Madagascar, Burundi).

In doing this, some of the main trends from 1994 have been confirmed: administrations responsible for land have been unified or even combined in the same agency (CNR in El Salvador), cadastral maps have been digitized and georeferenced within the national system and databases capable of linking to the land area information system have been set up.

Despite their often exorbitant cost to citizens, title registration systems are often preferred, but under the impetus of the targets for combating poverty numerous initiatives have emerged,

such as in Madagascar, an African example. These alternatives to systematisation of land titles must be encouraged as a decisive step towards access to land, a much-coveted resource.

With regard to the mechanisms for recovery of costs to cover at least the processing costs or to recover the investment costs, a serious study needs to be carried out to determine whether the cadastral system could be self-financing or even contribute to the State budget, following the example of El Salvador, a small country which has established financial mechanisms within the CNR.

Finally, a modern vision of development also advocates reducing staff numbers, which is achieved, mainly in Europe, by modernisation of government departments and the age pyramid.
As far as increased participation by the private sector is concerned, many models have emerged in the French-speaking area – I cite as proof the success of the Federation of French-speaking Surveyors within the FIG – but much progress remains to be made.

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BIOGRAPHICAL NOTE

Graduate of the École supérieure des géomètres et topographes (ESGT) and master's degree specialising in cadastral systems and land policies. Member of the Association of French Licensed Surveyors.

Has worked on numerous cadastral projects (Argentina, Central America, Greece, Lebanon, Syria, Maghreb, Mauritania, Senegal, Congo Brazzaville, Madagascar, Brazil and Burundi) on behalf of the World Bank, the European Union and a number of bilateral cooperations.

Doctorate at the Doctoral School of Paris I – Sorbonne. Work on land registration in the former French colonies and on the complementarity between cadastre and cartography.

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